

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

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1. (Currently amended) A data recorder for recording data on a recording medium by emitting a laser beam against the recording medium, the data recorder comprising:  
a laser drive circuit, which controls the power level of the laser beam, wherein the laser beam is generated at a relatively high power level sufficient to form a recording pit on a recording layer of the recording medium and at a relatively low power level insufficient to form a recording pit on the recording layer of the recording medium in accordance with the recording data; and  
an interrupt control circuit for interrupting data recording when a predetermined state in which buffer underrun may occur is detected, wherein the interruption occurs when the laser beam is generated at a relatively low power level.

2. (Currently amended) The data recorder according to claim 1, wherein the recording data includes synch pattern data, the power level of the laser beam corresponding to the synch pattern data is the relatively low power level and the relatively high power level, and the interrupt control circuit interrupts data recording when the laser beam is generated at the relatively low power level in accordance with the synch pattern data.

3. (Currently amended) A data recorder for recording data on a recording medium by emitting a laser beam against the recording medium, the data recorder comprising:  
a buffer memory for temporarily storing data that is to be recorded on the recording medium;

an interrupt control circuit for interrupting data recording when a predetermined state in which buffer underrun may occur is detected;

an address memory connected to the buffer memory, wherein the address memory stores at least one of an address of the recording medium and an address of the buffer memory when data recording on the recording medium is interrupted, each address indicating a location of data when the recording interruption occurred;

a synchronizing circuit for sequentially reading the data recorded on the recording medium prior to the recording interruption and the data stored in the buffer memory prior to the recording interruption and synchronizing the recorded data and the stored data; and

a restart circuit for restarting data recording on the recording medium based on the address stored in the address memory, wherein the interrupt control circuit interrupts data recording when the laser beam is generated at a relatively low power level.

4. (Currently amended) The data recorder according to claim 3, wherein the data includes synch pattern data, the power level of the laser beam corresponding to the synch pattern data is the relatively low power level and the relatively high power level, and the interrupt control circuit interrupts data recording when the laser beam is generated at the relatively low power level in accordance with the synch pattern data.

5. (Original) The data recorder according to claim 4, wherein the data is recorded in the recording medium in sector units, each sector including sector address data, and wherein the address memory stores the sector address data where the recording interruption occurred.

6. (Original) The data recorder according to claim 5, wherein the predetermined state is a state in which there is a possibility that the amount of data in the buffer memory may become null and cause the buffer memory to become empty.

7. (Currently amended) A data recorder for recording data on a recording medium by emitting a laser beam against the recording medium, wherein the data is formed by a plurality of sectors, each of the sectors including a synch pattern that has a predetermined number of bits ~~representing a low level~~, wherein the laser beam is generated at a low power level in accordance with ~~the low level of~~ the synch pattern, the data recorder comprising:

an interrupt control circuit for continuing recording until an interval between sectors appears when detecting a predetermined state and interrupting the recording operation when the laser beam is generated at the low power level in accordance with the synch pattern of a sector.

8. (Currently amended) A data recorder for recording data on a recording medium, the recorder comprising:

a buffer memory for temporarily storing data;

an encoder connected to the buffer memory to encode the data read from the buffer memory and to generate recording data;

a recording unit connected to the encoder to emit a laser beam against the recording medium in accordance with the recording data and record the recording data on the recording medium; and

an interrupt control circuit connected to the encoder to detect a predetermined state in which buffer underrun may occur during data recording, wherein, upon the detection of the predetermined state, the interrupt control circuit controls the encoder so that data recording is interrupted when the laser beam is generated at a relatively low power level.

9. (Currently amended) The data recorder according to claim 8, wherein the data includes synch pattern data, and the interrupt control circuit interrupts data recording when the laser beam is generated at the low power level in accordance with the synch pattern data.

10. (Original) The data recorder according to claim 9, wherein the predetermined state is a state in which there is a possibility that the amount of data in the buffer memory may become null and cause the buffer memory to become empty.

11. (Currently amended) A method for recording data on a recording medium by emitting a laser beam against the recording medium, wherein the data is formed by a plurality of sectors, each of the sectors including a synch pattern that has a predetermined number of bits ~~representing a low level~~, wherein the laser beam is generated at a low power level and a high power level in accordance with ~~the low level of~~ the synch pattern, the method comprising:

continuing recording until an interval between sectors appears when a predetermined state in which buffer underrun may occur is detected; and

interrupting the recording operation when the laser beam is generated at the low power level in accordance with the synch pattern of a sector.

12. (Currently amended) A method for recording data on a recording medium by emitting a laser beam against the recording medium, the method comprising:

temporarily storing data in a buffer memory;

recording data read from the buffer memory on the recording medium;

interrupting data recording when a predetermined state in which buffer underrun may occur is detected;

storing in an address memory at least one of an address of the recording medium and an address of the buffer memory when data recording on the recording medium is interrupted, each address indicating a location of data when the recording interruption occurred;

sequentially reading the data recorded on the recording medium prior to the recording interruption and the data stored in the buffer memory prior to the recording interruption;

synchronizing the recorded data and the stored data; and

restarting data recording on the recording medium based on the address stored in the address memory, wherein the interrupting of the data recording is performed when the laser beam is generated at a relatively low power level.

13. (New) A data recorder for recording data on a recording medium by emitting a laser beam against the recording medium, the data recorder comprising:

a buffer underrun determination circuit for determining whether or not the buffer memory is in a state in which buffer underrun may occur based on the amount of data stored in the buffer memory;

a laser drive circuit, which controls the power level of the laser beam; and

an interrupt control circuit for continuing recording when the buffer memory is in a state in which buffer underrun may occur and interrupting the recording operation when the laser beam is generated at a relatively low power level.

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